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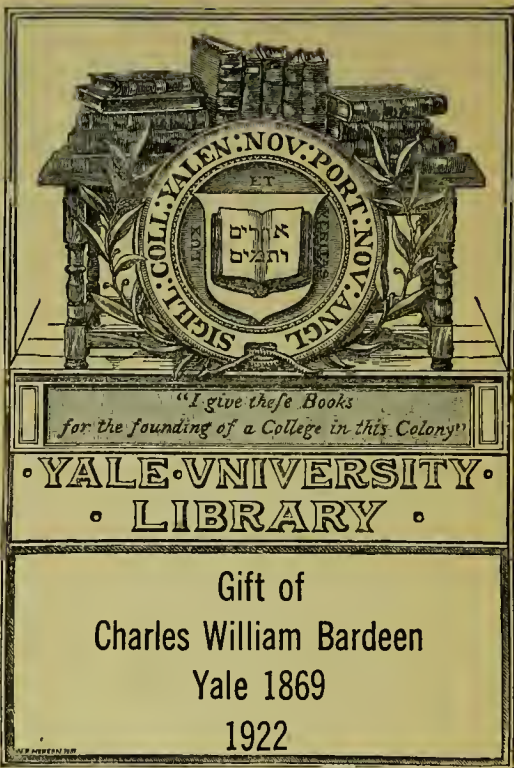
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ARTHUR LOVELL

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NEW LIGHT
ON CONSUMPTION

BY SAME AUTHOR

ARS VIVENDI

BEAUTY OF TONE IN
SPEECH AND SONG

CONCENTRATION

VOLO; OR, THE WILL

IMAGINATION AND ITS
WONDERS

REICHENBACH'S
RESEARCHES

HOW TO THINK

DEEP BREATHING

THE IDEAL OF MAN

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NEW LIGHT ON CONSUMPTION

BY

ARTHUR LOVELL
.,.,

AUTHOR OF "ARS VIVENDI," "CONCENTRATION,"
"DEEP BREATHING," ETC.

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P R E F A C E

THE Etiology of Consumption presented in the following pages is founded upon observation of Nature, and experimental research into the natural conditions and modes of activity of Protoplasm—the first Substance of Life, and the Animal Cell—the unit material of the living organism.

The conclusions arrived at—irrefutable and irresistible—are in accord with the teachings of Anatomy, the science of Form, and Physiology, the science of Function.

For several years the idea had been entertained that all disease was cell disease in multifarious forms. Hitherto no adequate explanation, that could withstand the assault of hostile criticism, had been or could be given why the cell is more prone to disease in certain organisms than in others. Now, however, there is presented

a theory—absolutely simple and absolutely comprehensive—which not only accounts satisfactorily for the breaking down and deterioration of the cell, thus rendering itself an easy prey to noxious bacilli; but which will be proved on rigorous examination to be the only explanation sanctioned by Nature herself.

It would be easy for me to accumulate proofs from actual experience; but individual cases would have swelled this volume to an inconvenient size, which is not advisable in a work intended for the public at large, as well as for the student of the inner mysteries of Nature.

Briefly, the theory of the primary cause of Consumption—inadequate supply of oxygen in the particular organism that falls a victim to the ravages of the disease, due to condition of Nose, Throat, and Chest—is founded upon the operations of Nature; while the verification of the theory, and the elaboration of the cure based upon it, have

PREFACE

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been the work of twenty years' constant research, as well as actual experience of the various stages of Consumption.

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94, PARK STREET

GROSVENOR SQUARE, W.

January, 1912

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NEW LIGHT ON CONSUMPTION

CHAPTER I

HISTORICAL RESUMÉ

Consumption, a term derived from the Latin *con* and *sumere*—to take up completely or to destroy—means the wasting away or slow destruction of the lungs and tissues of the body. The same signification is implied in the term Phthisis—derived from the Greek, to waste away.

These two terms may be said to describe with perfect accuracy the actual facts of the disease—literally, wasting away or consuming gradually.

Tuberculosis is a term derived from the Latin *tuber*—a swelling, and its diminutive *tuberculum*—a little swelling or knob. This term has been largely used of late years in

connection with the theory of Professor Koch that the wasting away of Consumption is caused by a micro-organism which he called the *Bacillus Tuberculosis*.

Before dealing directly with the theory of the origin, and the rationale of the treatment of Consumption, it is advisable to cast a rapid glance over the past in order the better to understand and appreciate the ideas of to-day.

Owing to the wide prevalence of Consumption in every age and in every country, it can be taken for granted that various theories as to its origin, causation, and treatment have been in vogue from time to time. Some of these theories were absurd, some came very near the truth. They can be grouped under two main heads—those based upon fantastic ideas due entirely to errors of observation and reasoning, such as the hideous practices of the leech of the middle ages; and those founded upon correct observation of Nature. These two schools of thought have always

been at daggers drawn, and have always struggled for supremacy. Till quite recently, the former had the advantage of numbers and cohesion, and gave a very rough time to their antagonists. Now the tables are turned, and the latter are becoming formidable.

It is absolutely necessary for the reader to bear in mind these two antagonistic schools of thought—that have fought in the past as they fight to-day;—otherwise he may fail to understand the actual facts of the present moment.

In the beginning and middle of the nineteenth century, the orthodox medical treatment of Consumption was to shut the victim in a room on the plea that air was dangerous. Along with the principle of exclusion of oxygen, reigned the principle of administering the most awful concoctions derived largely from the practice of the leech of a former day—the direct ancestor of the orthodox medical man. Is it any wonder that Consumption became in the popular mind an incurable disease? Then

came the discovery by Professor Koch, which was hailed as the red-letter day in the treatment of Consumption.

After the terrible fiasco of Tuberculin, the attention of the public was drawn, in despair, to the Open Air Cure which had been advocated—if not actually in vain, at any rate to little practical purpose so far as the majority were concerned—by the other school of thought, whose views were quite unknown to the orthodox medical man. Some of these men were doctors, such as Wilson, Balbirnie, Sydenham, Combe, Currie; others were not.

Suffice it to say that the principle of the Open Air Cure and the sanatorium was advocated openly and boldly as the only true method of dealing with Consumption. If this school of thought had been able to carry out its principles on a larger scale, *the lamentable mistakes made by the untrained practitioners at the inception of the Open Air Cure would have been avoided*, and Consumption would have been far more effectually dealt with.

CHAPTER II

THE REAL PROBLEM

Bacteriology

The real problem of the origin of Consumption was not touched by Koch and his followers, for the bacillus tuberculosis cannot logically be considered the primary cause. I am perfectly well aware that this statement is calculated to excite the indignation of a certain section of the medical profession; but this fact does not concern us at present, inasmuch as the ordinary medical man lays no claim to be a philosopher,—understanding by that much abused term a thinker who works out his problem from premiss to conclusion. Still less can the bacteriologist be said to belong to the philosophic school, for his eye is so fastened upon the bacillus that he is incapable of seeing anything else. The ideal of the bacteriological school is

certainly a laudable one. It is nothing short of a straight cut to the highest good by the simple process of catching bacilli and stewing them in their own juice.

It is always consoling to the human mind to be told on high authority that, strictly speaking, we do not deserve the woes of existence. The primitive mind of the past accounted for bodily aches and pains, as well as outside misfortune, by the action of devils and evil spirits who delighted in torturing innocent mortals through no actual fault of the latter. If we are to believe the modern bacteriologist, the primitive mind was quite right, for nobody would get Consumption or anything else but for bacilli which delight in pouncing upon luckless individuals.

I have said the bacteriologist is not a philosopher. If he carried his premiss to a logical conclusion, as a philosopher should, he would see that bacilli could be made to account for every evil that befalls us, from a disastrous financial speculation to disap-

pointment in love. Every sensible person feels that he really deserves neither of these unpleasant experiences ; and to be assured on high authority that it was entirely the fault of the ubiquitous bacillus would be as soothing as balm of Gilead to a festering wound. The prospects of bacteriology are indeed far-reaching. It is only because the bacteriologist is not a philosopher that he has failed to carry out his principles to their logical conclusion. Why stop at sera for health? In the Middle Ages there was a rite called the "Taigheirm," based on the same principle as the vivisection of to-day, which consisted in roasting alive several black cats for days and nights in succession, with the object of compelling the evil spirits and the devils to grant the experimenter long life and wealth in addition to health. Why should not the vivisector of to-day follow the example of his brother of long ago, and concoct sera to ward against not only disease, but poverty, ill-luck, and domestic troubles? There is quite as much sense—

and no more—in the one as in the other.

With this tribute to the genius of vivisection, we shall proceed with our main theme, which is the real problem of the origin of Consumption. In order to do so we must start at the beginning, and deal with a question which lies at its very root?

What is Life?

The reader need not be alarmed at a question which appears to be not only insoluble, but to have absolutely no bearing upon the treatment of Consumption. Every sentence and every paragraph in this little volume is designed to go straight as an arrow to the point—final solution of a problem which has excited universal attention in the world of to-day. We must therefore plant our feet upon principles which, amid the shifting sands of conflicting theories and opinions, stand, as they have ever stood, firm and unshaken like the Rock of Ages. It is the perception of, together with reliance upon these eternal principles, which confers the

right and imposes the duty to speak with authority and power.

All human knowledge must, sooner or later, be brought to bear in a practical manner upon human life, must subserve its aims, and advance its ends. These aims and these ends are the development of mankind from a low to a high level of existence—evolution of the race from the animal to the divine.

Time was when health and disease were regarded as mysterious dispensations of an inscrutable Providence, whose ways were past finding out. We know now that everywhere is the close chain of cause and effect, which binds all things together in one whole without favour and without pity. The links in the chain are difficult to find, but they can be discovered by patient research; and when discovered, they furnish to the mind an adequate and satisfactory explanation.

Thus it is with our question, "What is Life?" While there are many points which the human mind fails to grasp as to

life in the abstract, it is not only possible but absolutely essential to understand life in the concrete, that is, in its relation to the human organism. This is the sense in which the question "What is Life?" is now put. The engineer and the electrician know enough about the steam engine and the dynamo to be able to say with certainty what will happen in such and such a contingency, for they are dealing with forces that manifest themselves in the invariable sequence of cause and effect. Just so with the living organism. Vitality is no more and no less mysterious than any other natural phenomenon, for we are invariably dealing with the law of Cause and Effect.

We are now in a position to understand the reason why *we must begin the solution of the problem of Consumption by asking the question, "What is Life?"*

From our present point of view, it is enough to state that life is a force, or mode of motion, associated with a living, as distinguished from a dead, animal. With the

other forms of life, such as vegetable or plant, we are not concerned.

The next step is to understand that this "life," which is associated with a living animal, demands conditions under which alone it is able to manifest itself. As these conditions vary, so does the "life" vary. If the conditions are unfavourable, the life is meagre in quality and quantity; if the conditions are favourable, the life is abundant. *It is essential to grasp the importance of this point, because the solution of the problem of Consumption will be found to depend upon it.*

It is of no use "to kick against the pricks," that is to say, to expect life to manifest itself under unfavourable conditions. A Law of Nature, once understood, must be obeyed; and, further, is cheerfully recognised by the wise man as working for the good of humanity.

The Living Organism

I have said that life can only manifest itself under suitable conditions.

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We now come to deal with these conditions more fully.

The *primary conditions are a form or structure or body capable of being used as an instrument or machine for transforming one mode of universal energy into another.* Thus, air and food are not "life," so far as the human organism is concerned; but they are capable of being transmuted by the working machinery into what is called variously "vitality," "life," "nerve-force," "nerve-energy," "vital-force," "principle of life." This life becomes associated with, and controls the machinery which manufactures and generates it out of the various ingredients of air, food, and sunshine.

This life is measurable both as to quantity and quality, for it is produced on precisely similar principles to those on which other modes of energy, such as electricity, heat, light, etc., are produced by non-living machines or instruments.

It is important that the reader should

grasp this point unmistakably. Let me give an example.

You can measure accurately the force or power exerted by a machine like a steam-engine; and you can express it in terms which are easily understood, such as so much horse-power, etc.

In a similar manner, you can measure the "life" produced or generated by the living organism. It is constantly done by the merest tyro in the science of vitality, when he pronounces the opinion that so and so is robust, so and so is weak, so and so is getting better, so and so is dying, etc. That is nothing but measuring, more or less roughly, the quantity and quality of the life generated by the human machine.

Some ultra-pious persons will be shocked at the idea that human "life" can be measured as precisely as the powers of a steam-engine or a dynamo. But as we are now concerned with preaching the Gospel of Truth, it matters very little what

anybody likes or dislikes—the sole point being whether a certain statement is true.

There is nothing derogatory to the dignity of man in saying that he is a machine for transmuting one form of force into another, and that his well-being depends entirely on the integrity of his mechanism as a whole. That mechanism is at the same time most complex and most simple. Its inner operations are infinitely more complex than any machine invented by human ingenuity; and yet it is regulated and controlled with consummate ease, for when properly handled it is self-repairing as well as self-moving, and requires no bungling attempts at improvement on the part of its possessor. All that Nature demands—and with no uncertain voice—is that the owner of this wonderful piece of mechanism should use it intelligently. This is not such a difficult task to impose upon us as appears at first sight.

If we were compelled to know all about the various parts of this wonderful machine

before we could hope to use it intelligently, there would be no hope for us or for any living creature on the face of the earth. Nay, for that matter, life would be absolutely out of the question, for no living thing could possibly have survived the long period of pupilage necessary to learn the hidden secrets of the machine. Nature knew her business; and did not require the impossible at the hands of her living children. She constructed a most cunning piece of workmanship, which the new-born babe can set in motion by a simple device, and not merely set in motion, but keep going incessantly and regulate to perfection. The most learned Anatomist and Physiologist in the world has no better chance than the new-born babe.

This point must be well borne in mind, for as a general rule it is absolutely ignored by persons who pose as authorities and claim to know better than their neighbours. I am far from decrying Anatomy and Physiology as branches of Science. Knowledge

of the Laws of Nature in all their spheres of action—from the constitution of the stars to the formation of the atom—is in itself and for itself to be worked for. What I wish the reader to understand is that *Nature does not demand perfect knowledge of Anatomy and Physiology as an indispensable condition for running and regulating the human machine.*

The True Craft

The term “priestcraft” in modern times is used synonymously with cunning or artifice displayed by a certain section of the community to gain power or wealth. It must be remarked, however, that this term is capable of two significations—the true or real priestcraft, and the imitation which most persons abhor and condemn. *The true or real priestcraft is the art or craftsmanship displayed by the wise man who has a deeper insight into the purpose of Nature, and who employs and directs the knowledge gained through this deeper insight for the*

advancement of his fellows. The true priestcraft is the highest occupation in which a human being can be engaged ; and in ancient times it was regarded with universal reverence, for it taught the sanctity of health, and inculcated the constant practice of rules by the observance of which the ordinary man could maintain his body as a temple of holiness.

This lofty idea of priestcraft gradually decayed until it finally degenerated into the popular meaning—a cunning attempt to impose upon the credulity of ignorance, and to stir up the evil of fanaticism in opposition to knowledge and progress. It is the false priestcraft which has always been the bitter foe of truth in health and healing of body, as well as health and healing of soul. The true and original priestcraft included the salvation or health of the whole individual,—body and soul, soul and body.

The objection that priestcraft and Consumption have little in common does not hold, for we must recognize *the unity of the*

individual organism. There is only one blood, only one nervous force, only one life. If the blood in the toe had nothing to do with the blood in the head, or the life of the brain was apart altogether from the life of the stomach, there might be an excuse for treating man in separate water-tight compartments. The truth is that the individual organism is one whole manifesting itself in various organs and tissues subordinate to, and forming an indissoluble part of, the whole. The true priestcraft has always recognized and preached this doctrine; the false priestcraft has always failed to grasp it.

The field of knowledge is so vast that it is necessary to limit each sphere of investigation within certain bounds. This is the plan adopted and sanctioned by Nature so far as the animal machine is concerned, and this is the plan followed by the true exponent of health. While minute study of Anatomy, Physiology, and Pathology is not demanded by Nature before allowing us to enjoy the blessings of life, there is a

certain kind of knowledge *which Nature exacts from each individual under the dire penalty of disease and suffering*. It is this indispensable knowledge that has been and must be preached far and wide by the true priest of holiness and health.

Vital Capacity

It was remarked that the living organism is a machine for producing a certain kind of force which can be measured accurately both in quantity and quality, and is estimated more or less roughly by every person who observes his neighbour's state of health.

We can express this sufficiently clearly for our present purpose in the form of a diagram (No. 1), "The Vital Scale."

By putting the state of "magnificent health" at the top of the scale and "impending death" at the bottom, it is comparatively easy for the reader to place himself with a fair amount of accuracy in the proper class to which he belongs, and to

DIAGRAM I
THE VITAL SCALE

A	Magnificent	Health
B	Fair General Health Feeble General Health	
C	Chronic Ill-health such as Neurasthenia, Gout Rheumatism, Dyspepsia, Liver and Kidney Affections	
D	Serious Constitutional States Consumption, Cancer	
E	Impending	Death

form a pretty good estimate of the position occupied by his friends. Thus it would be impossible for anybody to mistake a consumptive for a person of magnificent health, and *vice-versa*.

In one's own case, it is possible to judge by certain sensations whether the body is capable of sustaining prolonged exertion without discomfort, or whether one becomes easily tired after the slightest effort. In pronouncing an opinion upon others, we have no direct means of knowing their inner state of strength or weakness; but we can guess fairly well from their appearance, and accordingly place them high or low in the barometer of life.

The actual meaning of this process of reasoning is that we instinctively know that every effect has an adequate cause, and that every appearance is the outward and visible sign of an inner reality. We may not thoroughly understand that inner reality; but we are certain of the action of Cause and Effect, and are convinced

that if we could only follow the links of the chain, we could explain why one person has strong health, whilst another is always complaining of pain or weakness. Using technical language, we know that there is a *difference in the vital capacity—the power of generating vitality—of the strong man and the weakling.*

In order to understand a little more about "Vital Capacity," we must penetrate beneath the surface and take a bird's-eye view of what goes on inside the living machine.

Metabolism

If we could form a picture of what is incessantly going on within us, we should see constant action in every part of the body without a single moment's intermission. This incessant movement is the essential feature of living matter, and is termed by physiologists "Metabolism," a word derived from the Greek—signifying "change."

The only way to stop metabolism is to

destroy the machine, for life is impossible without it. Life in its highest and fullest expression, such as is found in Class A (Diagram 1), implies metabolism at a high rate of activity (constructive); life at its lowest expression, such as is found in Class D, implies metabolism at a low rate (destructive).

On reflection it will be seen that metabolism has to perform the natural functions of building up and pulling down, in order to enable the machine to carry on its work. This is expressed in terms of Physiology by saying that metabolism is—

- (1) Positive, Constructive, Anabolic, or Synthetic, in the course of which non-living matter is assimilated or built in by living matter.
- (2) Negative, Destructive, Katabolic, or Analytic, in the course of which living matter is expended or pulled down to the state of non-living matter.

Robust health is the condition of the machine in which the "pulling down" is properly regulated; Consumption, that in which the "pulling down" predominates over the "building up."

We shall see presently *what is the actual cause which produces the effect of too rapid "pulling down,"* literally giving rise to the wasting of Consumption. Attention, therefore, must be fixed upon this point, for it is here that bacteriology has gone astray in assigning to the bacillus tuberculosis a rôle which cannot logically be ascribed to it.

Having taken a general bird's-eye view of the chemical change going on without ceasing in the living body, we shall now consider the bricks of which the house is composed—the animal cells.

The Cell

All the tissues and organs comprising the animal machine are not only developed from a cell, the ovum, but are made up of an infinite number of cells essentially similar to the original mother cell, though differing in form and property. The cell is

the unit from which the living house is built.

The cell is Nature's innermost shrine, whose mysteries, though past finding out in all their aspects, can be probed with unerring certainty so far as vitality is concerned. The cell, like everything else, is subject to the law of cause and effect, and performs its functions according to fixed principle. The cell does not go wrong here and go right there without some definite reason.

Just as the multitudinous cells of the organism can be traced back to the original mother cell, so can the various forms of disease be traced back to the aberration of the cell itself.

From a physiological point of view *there can be only one disease in the body, constitutionally or locally—cell-disease*. The cells of the brain go wrong, and there is mental derangement. The cells of the kidneys go wrong, and there is kidney disease in its various aspects. The cells of the lungs go

wrong, and there is Consumption ; and so on *ad infinitum*.

Conversely, as there is only one disease, cell-disease, so there is *only one cure, restoration of the cell to the normal condition in which it can perform its natural functions.*

Let me take as examples the liver and the spleen, two organs of prime importance in the animal economy. These two organs are an immense assemblage of cells which have each to perform their individual part. What happens if a particular cell or group of cells is unable to carry on its allotted task ? So much work is left undone, the blood begins to feel the effect immediately, and the organism suffers as a natural consequence. The outer and visible effect, such as ague, gout, or rheumatism, etc., is not the disease itself, but the effect of a cause which is frequently unsuspected. In the same manner, the bacillus tuberculosis cannot in any sense of the term be said to be the cause of the cells in the lungs breaking down, and thus developing consumption in the organism.

The cells of the lungs have been giving way for years before the bacillus makes its appearance, and *through quite another cause, the gradual withdrawal of the chief factor of vitality. The tide of life was going out instead of coming in*, and the human vessel got stranded on the rocks. What part the bacillus tuberculosis actually plays afterwards is rather doubtful, in spite of the efforts of bacteriology to saddle it with the whole responsibility of consumption. The question is one of theoretical rather than practical interest, for it is universally acknowledged that when the vessel is sailing on a full and flowing tide, the bacillus gives no trouble. It may be that the bacillus plays the part of a lighterman, whose duty is to unload the vessel as quickly as possible once it is stranded high and dry on the rocks, or it may be that it plays the part of the wrecker. In any case, the real problem is to get the tide to lift the vessel once more on its bosom.

Cell Growth

Inasmuch as chemical action is incessant in the whole of the human body, involving a constant building, repairing, and pulling down; and inasmuch as the body is an aggregation of individual cells grouped together for division of labour under the guidance of the master workman, it follows that the cell itself is a beehive of activity.

The cell is composed of two parts: a soft gelatinous granular material similar to what is found in the original cell, the ovum, called protoplasm; and a nucleus or centre embedded in it. In some cells the nucleus has a solid spot within it, the nucleolus, which is the innermost centre. Some cells are more simple than others, the size and complexity varying according to the functions of the organ to which they belong.

The nucleus is a small body embedded in the substance of the cell, and generally surrounded by a well-defined wall—the nuclear membrane. It is in the nucleus that the growth of the new cell commences, the

process of reproduction being by direct and indirect division. The latter method is the general one, and is termed Karyokinesis (movement of the nucleus) or Karyomitosis (thread movement).

For our present purpose, it is not necessary to enlarge further on a topic which is of extreme interest to the student of anatomy and physiology. But it is *absolutely necessary for the reader to have a general idea of the cell and its contents in order to grasp the significance of the real explanation of Consumption.*

Protoplasm

We are getting nearer and nearer to the actual problem.

Protoplasm, otherwise termed blastema, sarcode, bioplasm, or germinal matter, is the basic substance with which life can associate itself, or from which life can be generated. It is a compound of water and proteid, containing in addition certain inorganic substances, such as calcium, phosphorus, etc.

It is of semi-fluid, viscid consistence, and appears as a granular substance, consisting of minute molecules embedded in a transparent matrix, or as a clear and homogeneous hyaline substance.

The characteristics of protoplasm are the characteristics of life—the properties of motion and nutrition.

By protoplasmic motion is meant the ability to change its position and shape, by thrusting out from its main body an irregular process into which the main body itself is gradually drawn, thus occupying a new position in space. This has been termed “Amoeboid Movement,” from its resemblance to the movement of the Amoeba, the lowest form of living matter.

By protoplasmic nutrition is meant the power of attracting to itself the materials for growth which it requires from surrounding matter. When the protoplasmic substance comes in contact with any external particle, it encloses it by throwing out one or two

processes or feelers from the parent mass, and incorporates it with itself.

These two processes of internal, self-propelled, motion and voluntary nutrition constitute the difference between animal life and non-living matter. In *protoplasm is contained the epitome of all human life, great and small, high and low.*

Dead Protoplasm

When the chemist proceeds to analyse protoplasm he finds it to consist of the most familiar ingredients, such as water, proteids, fats, carbohydrates—the substances that we take into our bodies as food. As a matter of fact, we eat simply to feed protoplasm; and when we have had enough we have had a message from protoplasm that for the time being it is satisfied. When, in addition to all this, we find that protoplasm can die a violent death quickly and suddenly, or pine away slowly and gradually, our hearts go out towards it in earnest sympathy.

What is the difference between dead and living protoplasm? Simply the difference between dead and living human beings. And what is the difference between the chemical examination of dead and living protoplasm. Simply the difference between the chemical examination of the corpse and the living man.

In a nutshell, life in man is the same as life in protoplasm; death in man is the same as death in protoplasm.

On the Track of Consumption

We have now reached the point at which we can put our finger on the *real, primary, and absolute cause of Consumption*.

It was necessary to work up to this point from the very beginning of life—the cell with its ingredients—in order to clear away any possibility of doubt in the mind of the reader as to a truth which will settle once for all the question of the cause and the treatment of Consumption.

It has been shown that there is complete

identity between protoplasm in life and death, and man in life and death.

Now let us put the question, What is the difference between a dead and a living man ?

The answer is very simple—*the power of breathing.*

Look at the dead body. It lies still and cold, with no motion.

Compare it with the living body which moves and breathes.

Dead protoplasm lies still and cold; living protoplasm moves and breathes.

The human being cannot live without oxygen; protoplasm cannot live without oxygen.

We can now state this fundamental fact in another way:—*Life demands, as the indispensable condition of its manifestation in a form, a constant supply of oxygen.*

In Diagram 1, "The Vital Scale," on p. 30, it is seen that life as generated by a living machine, whether protoplasm or an animal, varies immensely in quantity and

quality,—from Class A, which has magnificent health, to Class D, which is approaching the point where dissolution takes place.

Therefore it must be an indisputable fact *that the supply of oxygen varies in exact proportion to the variation of the vigour of life.*

In Class A, the supply of oxygen must be very high; in Class D, very low. To refuse to accept this conclusion is not only to refuse belief in the law of Cause and Effect, but to substitute fantastical ideas which have no place in the scheme of Nature.

Diagram 2 will settle the matter.

The Law of Structure

In order to leave no loophole for doubt or hesitation on this point, the reader is advised to use his eyes on the first dozen of his fellow-creatures whom he may chance to meet, and to test the theory in the light of practical experience.



The structure of the persons forming Class A is strikingly different from that of


DIAGRAM 2


PROTOPLASM AND OXYGEN

Let the black dot = Ingredients of protoplasm,
and the physical form

„ circle = Oxygen

Because
∴ {
 = Dead { Protoplasm
or Body
 and
 = Living { Protoplasm
or Body

Therefore
∴  = Class A { Protoplasm
in Diag. 1 { or Body

 = Class D { Protoplasm
in Diag. 1 { or Body

those in Classes B, C, and D. The principal feature is the broad and powerful chest in the former case, and the narrow, contracted one in the latter.

What is the actual significance of this fact? The chest is the bony framework in which are encased the special organs for drawing in and transmuting the air to kindle the fire of life. Nobody can possibly mistake the narrow chest of Consumption for the framework necessary to contain the powerful lungs of Class A.

The fact that many strong men develop Consumption does not bear upon the point with which we are dealing at this juncture. I have been often asked how it is possible, without calling in the aid of the bacillus, to explain the well-known fact that athletes and others of a strong physique frequently contract Consumption. I shall not shirk this question when it is dealt with in its proper place. So far from being an argument in favour of the ravages of the bacillus tuberculosis, the point raised about athletes

and strong men becoming consumptive proves conclusively how utterly at fault the theory of bacteriology has been from first to last.

The law of structure is in absolute harmony with the requirements of life. It is another form of explaining the principle of cause and effect; and throughout the wide realm of Nature there is and there can be no exception, any more than there is and there can be no exception to the law that two and two, when added together, make four and nothing else. We may grumble at the hardness of our lot and the perversity of Fate when we try without success to make five, or five and a-half, out of two and two; but the sooner we recognize the fact the better, for then we have a chance of getting our five in the way ordained by Nature.

To assist the mind in understanding the law of structure, let us take any living animal for illustration. The lion, king of beasts, will serve our purpose. He is, bulk for bulk, the most condensed and compact

of animals, as well as the strongest; and his voice is as the voice of thunder in the ears of other denizens of the forest. He has a small, weak, and contracted chest? Nature laughs the thought to scorn. His chest is the chest of strength, and his voice is the voice of power—in harmony with the whole scheme of Nature in building up living structures. The protoplasm within the structure corresponds in every fraction of a square inch with the whole of the form, for the air cells expand easily and fully within the framework of the capacious chest. What endows the lion with his terrific strength is the extraordinary vital capacity permitted by the structure of the chest, in which the millions of air cells are incessantly at work fanning to a bright flame the fire of life.

Contrast with the king of animals another living machine, which is a great favourite with our friends, the bacteriologists, who have sacrificed thousands upon thousands of these harmless little

creatures upon the altar of Consumption. I refer to the guinea-pig, upon which most of the stock experiments for inoculation, etc., are performed. The reason why it is now presented for the reader's consideration is that, when placed side by side with the lion, it furnishes an admirable object lesson in illustration of the law of structure. The lion has a huge frame compared with the guinea-pig, and the life of the former is immensely superior to the life of the latter, *because the oxygen consumed by the one is enormous in proportion to the oxygen consumed by the other.*

The reader will now fully realise the meaning of the law of structure ordained by Nature in conformity with the imperative requirements of the living machine. When Nature wants to display the force and vitality of the lion, she gives the structure of the lion; when the force and vitality of the guinea-pig, the structure of the guinea-pig.

This is the principle upon which the engineer acts when he requires a certain

amount of work from the machine or instrument he employs. He does not expect a hundred horse-power from a machine calculated to produce twenty.

So blind is the ordinary mind to this obvious and indeed self-evident truth, that it requires a determined effort on the part of the author of this volume to force the reader to grasp its importance. It is hoped, however, that the reader in his turn will make an equally determined effort to master the point. /

The Lesson of the Candle

A very simple experiment which anyone can make at home is capable of proving the all-importance of oxygen. Though the burning candle is not alive like protoplasm, its relation to oxygen is similar, from the fact that air is necessary for its combustion. The burning of air by a candle is analogous to the burning of air by the lungs.

Set a candle alight on a table and watch it for a few seconds. Extinguish it in the

usual way. What have you done? You have destroyed the process which enabled the oxygen of the air to unite with the carbon of the wick, and the light has gone out.

That fact is simple enough. *The lesson lies in what the fact reveals to you.* Many persons observed that apples were in the habit of falling to the ground instead of soaring up to the sky, before the lesson dawned upon a thinker.

So with the candle. *Understand the whole lesson of the candle, and you understand the whole lesson of Consumption.*

Light the candle again. This time do not extinguish it as before, but hold a glass tumbler, mouth downwards, about three or four inches over the flame. Then gradually lower the tumbler till it covers the flame without actually touching the candle. Notice what happens. The flame of the candle begins to flicker more and more *till it dies out without being touched.* If you remove the tumbler before the flame has

actually disappeared, it will reappear and burn brightly as before. But if you do not take the tumbler away altogether, you can play a game of life and death with the candle, by the simple method of raising and lowering the tumbler.

You can play a game of life and death with the living organism in precisely the same way.

Why did the candle go out without being touched? Because you deprived it slowly and gradually of the oxygen it required to continue burning. Why did the flame flicker and flicker as you raised the tumbler higher and then lowered it? *Because you were playing with the force that keeps it alight.* By understanding this simple process you acquire complete mastery over the life of the candle.

Suppose an *invisible* tumbler is held by an unseen hand over your candle, and it behaves in this fashion. The result appears so extraordinary and so mysterious that you are at your wits' end to discover why this particular candle should die out while others

in the room are burning brightly. You think at first there must be a draught from somewhere that puts out the candle in this uncanny manner. Immediately you shut the windows. This does not solve the problem, for your candle begins to flicker and then die out when the invisible tumbler is lowered over the flame. Imagine this sort of thing happening very frequently, so frequently that you become panic-stricken and a prey to the most extraordinary fancies. You think of evil spirits as your ancestors did, and you beat the tom-tom, not quite in the same manner as the savage, for you laugh at the superstition which was frightened at what you know to be the operation of natural laws. You smile a superior smile as you read that savages were in a terrible state of mind when an eclipse of the moon or sun occurred; they ran about and made as much noise as they could, in order to frighten away the evil spirits which made an attack upon the light.

You are not far off the same attitude of

mind as your primitive ancestor, especially when you see the candle of one very near and dear to you go out without any visible and palpable cause. When you see the candle extinguished in the ordinary way, you think very little about it; but the unknown exercises a fascination that cannot be overcome.

Imagine that you have puzzled over the mystery of the flickering of the candle for several years, and have listened to this and to that explanation without being thoroughly satisfied, when you give up the problem in despair, and regard it as insoluble by the human mind. What thrill of joy is felt when a learned authority pronounces the solemn verdict that there is *a worm inside the wick which accounts for the behaviour of the candle!* And what ecstasy is experienced when you are informed that you have merely to squirt into the candle the essence of the dead bodies of this worm to make it burn its full length instead of going out without visible cause!

For a few days you are completely satisfied as to the cause and the cure.

Then you find something wrong with the preparation or what not of the essence, and upon one excuse or another you are told that the only real cure for the vagaries of the candle is to open the window. You comply with the advice, but, somehow or other, it does not answer satisfactorily ; and you are told that opening the window may be all right in its way, but that the only final cure is to squirt the worm essence into the candle, and frighten or otherwise molest the evil spirit of the worm. Remembering that the worm-essence squirting was tried before unsuccessfully, you lose faith, and begin to distrust the worm-theory man, while you feel sure that the idea of the open window is all right, but in your heart you confess you cannot understand why the candle goes out.

That has been the parable of the problem of Consumption in every particular.

First of all, the idea of a "draught"

struck the mind as a feasible theory, and the injunction was given by the orthodox medical practitioners of the middle of the nineteenth century, to be careful to shut the windows very tightly wherever Consumption was suspected, for too much fresh air was dangerous to the victim.

When this did not seem to answer, the bacillus theory was promulgated with a deafening beating of the big drum, and a fanfare of trumpets that was heard all over the earth. That fanfare still reverberates, but its sound is faint and its tone is hesitating, as if uncertain whether it had not better relapse altogether into its last mournful silence.

Summary

In order to rivet firmly together the various links in the chain of reasoning worked out in this chapter, it is advisable to summarise the main ideas:—

- (1) Life is a force or energy “manufactured” or “generated” by a living

machine ; in other words, a living animal can be regarded as an instrument or machine for transmuting the forces of air, food, and sunshine into a finer form, which is termed "vitality," "vital force," "nerve-energy," etc.

- (2) This "vital force" rules the body, being at once servant and master. While it depends upon the activity of the lungs and the other organs for its production, it alone enables the machinery to keep in motion.
- (3) No mystery is attached to this force, for it is capable of being measured as to quantity and quality, in a manner similar to that in which other natural forces are measured.
- (4) There is constant chemical action in the animal body resembling the activity of a manufactory. This action is termed "Metabolism of the Tissues," and comprises the two processes of Construction, or

Building Up, and Destruction, or Pulling Down.

- (5) Metabolism depends absolutely upon the presence of oxygen, which is contained in the air inspired by the lungs. Without oxygen, life is impossible both in the individual as a whole, and in the unit which is the epitome of the individual—the animal cell.
- (6) The basic substance of life is what is termed “protoplasm,” which, without oxygen, is a dead mass similar to all non-living matter.
- (7) *Vigour or weakness of life in any living organism depends upon the quantity of oxygen consumed.*
- (8) This is proved by the law of structure of all living animals—Nature building the chest in accordance with the requirements of the life to be generated.
- (9) This fact is demonstrated to perfection in the vital capacity of the lion—the

strongest and the most magnificent animal specimen.

- (10) Withdrawal, voluntary or involuntary, of oxygen from a living being implies diminution of the quantity of life produced. *Each cell requires its due and proper quatum of the quantity taken in by the lungs in respiration, and if it fails to get this quatum it feels the effect immediately in diminution of its special activity.*

- (11) Suppose that the quantity of cells in a living body be represented as 1,000. Of course the quantity is infinite, and a round number is suggested only for convenience of calculation. Suppose, further, that the amount of oxygen necessary for vigorous life be put down as 1,000.

If the amount of oxygen is lessened to 900, the quantity of life must be proportionally reduced by $\frac{1}{10}$ th, that is to say, the vigour of life

in the cells must necessarily be not so great as before.

Reduce the quantity of oxygen by another 100, and there is a further reduction in the quantity of life.

This is the natural descent from Class A, in Diagram 1, to Class B.

- (12) The consequences of the withdrawal of oxygen are more far-reaching and complex than the simple descent put baldly and crudely in the above paragraph. Owing to the constant activity going on in the living machine, the cells that feel the pinch of oxygen most will not only suffer themselves, but very seriously interfere with the general state. *In a short time the organism becomes demoralised, like the citizens of a State in which the governing authority has been weakened. There will be riot here, pillage and destruction there.*

- (13) *To argue that the rioting which followed*

the weakening of the central authority was the original cause of that weakening is the error of Koch, in attributing Consumption to the bacillus tuberculosis.

- (14) The bacillus not only cannot flourish in the vigorous cell, but gives no trouble of any kind whatever when the conditions of life demanded by nature are complied with.
- (15) Low forms of vegetable and animal life flourish in a stagnant pool. Are they the *cause of the water becoming stagnant?*
- (16) The tubercle bacillus is found in the decaying state of the living lung cells. Koch and his followers argue that it is the cause of that decay. With equal reason might they argue that the original cause of the stagnation of the water in a pool is the matter which collects upon it in the lapse of time.
- (17) The lesson of the candle is the lesson

of life and of Consumption. As the candle cannot burn without oxygen, so the body cannot live without oxygen. Deprive the candle of oxygen suddenly and completely, and it goes out immediately. Deprive the body of oxygen suddenly and completely, and it dies immediately. *Deprive the candle of oxygen slowly, and it goes out slowly ; deprive the body of oxygen slowly, and it dies slowly.*

- (18) Just as you can play with the flame of the burning candle, so you can play with the life of the living organism.
- (19) Nature is inexorable. *She cannot give life unless the conditions of life are complied with. She cannot give vigorous life unless the conditions of vigorous life are complied with.*
- (20) Consumption is the unavoidable result of failure to comply with the conditions of life—adequate supply

of oxygen. This is the primary, real, and absolute cause.

The bacilli found in decayed and decaying cells are the effect, just as algæ and green slime in a pool are the effect of the presence of stagnant water.

Knowledge of the cause of disease is half its cure, for it gives confidence and certainty of result.

In the next chapter, I shall deal with the processes and methods which aid Nature most effectually to recover the balance that has been lost in Consumption through the gradual diminution of oxygen supply.

CHAPTER III

THE REAL CURE

It is important at the outset for the reader to grasp the importance of the heading of this chapter, in order to enable him to guard against specious and plausible "high-authority" arguments which are full of sound and fury signifying nothing.

Very few persons are capable of resisting the influence of constant impressions, especially if driven into the mind under the guise of pompous external authority.

In all the medical text-books of the present day it is stated that Consumption is an infectious disease, *caused* by the invasion of the bacillus tuberculosis. The rank and file, with a few exceptions, repeat this dictum mechanically without the slightest attempt to ascertain whether it is true or not: it is sufficient that the text-book lays down the law that so and so is a fact.

In a question which so vitally concerns the whole human race, it is detrimental not only to the highest interests of Truth, but to the welfare of humanity, to accept ideas which cannot be reconciled with reason and common-sense.

In the former chapter, I referred to the difference between the true and the false priestcraft. It is impossible to uphold the true without waging uncompromising war with the false. The doctor and the clergyman are the two halves of the priesthood of Health in its fullest aspect; and they must recognize their responsibility in setting up and maintaining blind and perverse opposition to the onward march of Truth. Each section of the community exists as a class solely for the good of the whole. When that section fails in performing its functions, it must disappear inevitably through the natural operation of the law of survival of the fittest. External authority is a sham and a fetish, unless it is based upon the internal authority of knowledge and mastery

of the forces which govern the living organism in all its aspects.

The reader will now understand why I lay stress upon the significance of "*The Real Cure.*"

The real cure of Consumption means, and can only mean, one thing—*supplying in sufficient quantity what Nature demands for the needs of the living being.*

From the very nature of life itself, it is impossible to cure the disease or arrest its progress in any other way than by *endeavouring to raise the consumptive higher up the vital scale*, which, as we have seen, can in its turn be accomplished only in the way *Nature points out.*

To talk of vaccines, sera, tuberculin, or anything of the kind in dealing with Consumption is to display *complete ignorance of the conditions which Nature lays down plainly for our guidance.* It is only because the present orthodox medical system is in a hopeless muddle, so far as knowledge of fundamental principles is concerned, that

the need for sera to combat Consumption has ever been felt. It is time therefore, that the public conscience be thoroughly roused, and the demand made that the science of Health be placed on a more satisfactory basis than the present training undergone by the practitioner of medicine. It is not the fault of the individual; and I am not fulminating against him, but denouncing the mass of crude empiricism which he has to cram in order to pass his examination. It is this crude empiricism which is at the bottom of the various extraordinary crazes that have distinguished the practice of Medicine throughout the centuries, from the abominable and filthy concoctions of the leech of the Middle Ages to the repulsive products of the laboratory of the modern vivisector. It is high time, therefore, that medicine should turn over a new leaf in its chequered history, and fall in line with the teaching given by the study of Anatomy, Physiology, and Psychology.

This can be achieved only by instructing

the practitioner from the very start in the true science of Health, and revealing to him the infallible signs by which to detect at their commencement individual aberrations from the standard demanded by Nature, which confers vigours of mind and body just as easily as she inflicts disease and premature decay. For blind leaders of the blind there never has been and never can be any hope of anything but falling into the ditch. Of old the counsel was given to leave them alone. The world of to-day has no room for blind leaders or blind followers, and has made up its mind that they must either open their eyes or flounder still deeper in the ditch.

Straight Thinking

The reader is now sufficiently advanced in the science of the particular form of force termed vitality or life, to know for an absolute certainty that Nature cannot be cheated of her just dues, and that she exacts the penalty for violation of her primary law,

—oxygenation of the tissues of the living organism,—without pity and without favour.

It is necessary to emphasise this over and over again in order to give the key to the solution of the problem of Consumption.

The basis of the cure being a larger supply of oxygen, it follows naturally that the means proposed to be adopted must lead to that great end. If that end is steadily and unflinchingly kept in view, the veriest tyro can predict with unerring certainty whether a certain method is, *prima facie*, likely to be successful or not. Suppose, for example, that the method which was practised by the generality of medical men in the middle of the nineteenth century—shutting up the consumptive rigorously indoors with the notion that fresh air was highly injurious to weak lungs—suppose, I say, that the method was revived to-day, the humblest intellect would unhesitatingly pronounce that the person who advocated such a method was a lunatic—and a dangerous lunatic—even though he held

the highest diploma of every medical college in the world. So with the nostrums that are put forward to deal with the bacillus—you have merely to ask yourself a *simple straightforward question*—*Will this aid Nature to get more oxygen into the lungs of the consumptive? For Consumption is want of oxygen—nothing more and nothing less.*

It is astonishing how muddled we become merely because we cannot *think straight*. It seems as if the mind had an inherent antipathy to getting to the root of any problem by the direct road. I have often been amazed at the arguments put forward on behalf of tuberculin—that it stimulates the phagocytes, that it gives energy to the system, that it creates something, that it destroys the bacillus, etc. All these arguments are based upon *want of straight thinking*, which, in its turn, is based, in this case, upon *lack of knowledge of the elementary principles of life*. You might as well talk of propping up the walls of a falling house by sprinkling it with cayenne pepper, and

justifying your action on the plea that the pepper stimulated the bricks, made the rats and mice sneeze, and created a new condition, which, in some mysterious way that nobody could make out, tended to keep the house from tumbling to pieces.

From time to time new sera and vaccines have been proposed, but it passes the wit of man to give any definite reason why they should be adopted. A learned German professor made a heroic attempt to introduce a new serum to the notice of the International Congress on Consumption held a few years since in Paris; but the general verdict was that the attempt to follow the intricacies of the professor's arguments would produce such disastrous effects on the mentality of the Congress as a whole, that it was received with frigid politeness after being accorded the customary honours. The world has heard no more about it, for the theory immediately dropped back into the inner recesses of the learned brain in which it was hatched.

The Open Air Cure

The universal verdict of all thinkers is that the Open Air Cure is the only practical means to be adopted for dealing with Consumption. In spite of the work already accomplished on these lines, not only in the Sanatoria themselves, but in the general improvement of Housing, Sanitation, Ventilation of Public Buildings, Schools, etc., there is an undoubted feeling among a large section of the medical profession, and of the public at large that the Open Air Cure has not fulfilled all the expectations that were formed at its inception consequent upon the Koch lymph fiasco. "Something more" is considered absolutely necessary to make the Open Air Cure a real success. On that point there can be no difference of opinion among those who have closely followed the results of the working of Sanatoria. What form that "something more" is going to take in the immediate future will, I trust, be rendered clear by a careful perusal of this volume. Either there is a flaw in my

argument or there is not. If there is a flaw it must be pointed out by my opponents, and those who favour tuberculin, and other sera or drugs. If there is no flaw in my argument, *the scheme herein worked out will have to be adopted universally for the treatment of Consumption in the immediate future.* If I am right—and sound theory of the working of the living organism, as well as actual experience of results attained by following that sound theory prove incontestably that I am right—something must be done and *will* be done in defiance of ignorance, prejudice, and self-interest. A direct appeal is made to the interests of the people themselves, and to the welfare of the community as a whole.

There is a clear, plain, and definite reason why the Open Air Cure has not fulfilled the expectations that were formed a few years ago. This reason, in a nutshell, is *that the Open Air Cure inaugurated a new era in the treatment of Consumption, and demanded a new type of man, with different*

conceptions of vitality, different preliminary training, different standard of health, and different methods from those in common vogue among the practitioners of medicine.

The moment the Open Air Cure was introduced as a practical method for treatment and cure of Consumption, the darkness of matter began to feel a gleam of the true light, for the veil of ignorance which had lain so long on the science of the cure of disease began to be lifted.

The false reasoning and erroneous deductions made by Professor Koch with regard to the bacillus as the direct cause of tuberculosis, and the highflown expectations of cure raised in the hearts of thousands upon thousands of sufferers, only to end in a world-tragedy of crushing disappointment, *formed the nadir of depression in the true science of Health.* This point once passed, there has been witnessed a gradual and steady upward movement.

The Science of Breathing

If the Open Air Cure had at the first been

properly christened, in all probability it would have attained much greater vigour by this time. There is a great deal in a name, especially in a matter of this sort. The Open Air Cure should have been denominated "The Breathing Cure," if only to remind the sufferer of the all-importance of breathing being carried on as Nature intended, fully, deeply, and regularly. Familiarity breeds contempt, to such an extent that hardly anybody ever suspects that there is anything wrong with the breathing-power of the individual when disease begins to manifest. This was the cardinal mistake of the Open Air Cure.

It was taken for granted that the consumptive knew how to breathe sufficiently for the needs of his organism, and would do so if he could only be placed long enough in the open air. It never struck anybody to ask the pertinent question, What would be the good of putting a dead body in the Open Air? Yet not only must this question be put and satisfactorily answered, but the more pertinent

question must be put and satisfactorily answered—What is the good of putting a half-dead body or a threequarters-dead body in the Open Air, expecting a more or less miraculous and impossible cure?

That, I say, was the initial mistake of the Open Air Cure—to take for granted things which could not and never do happen. Just as the dead body cannot revive even when put in the Open Air, so the slow dying of Consumption cannot reasonably be expected to be arrested, without adopting processes and methods that will assist Nature, by concentrating and quickening the recuperative power of the particular individual. I am not referring to hypothetical nostrums which are supposed to be capable of doing this or that, but to the technical knowledge of breathing and suitable manipulations and exercises which are the indispensable accompaniments of what is termed the Open Air Cure. It was the total lack of instruction in this necessary technical knowledge which was responsible for the medical loss of faith in the efficacy of the

Open Air System to cure Tuberculosis, without recourse to something more in the shape of a new serum. This cry for "something more" has been much in evidence during the last few years.

The true explanation is that the Open Air Cure demanded a new type of practitioner.

The question thus becomes one of reform of procedure in educating and training the class which is concerned with this department of human activity. We are told on the highest authority that we must not put new wine into old bottles, under penalty of breaking the bottles and losing the wine. In plain language, this is nothing but simple common-sense. New men, new measures; and, conversely, new measures, new men. Human nature has its limits, imposed upon it naturally by training, education, habit, and age. The training undergone by the medical man absolutely unfitted him to understand, and to carry out with intelligence the real precepts of the Open Air Cure. Hence the almost incredible errors that

were perpetrated, both of commission and of omission. Unhappy victims of Consumption were made to sleep in shelters which formed no barriers to the drifting snow; and food was literally crammed down their throats even when the stomach rejected its contents again and again. But never in a single instance was a worthy and serious attempt made by the medical man to study intelligently the science and art of breathing, as part of the Open Air Practice.

The idea was that nothing could be done to assist or improve the operation of breathing, whilst every other function of the living organs of the body must be attended to at all costs.

On reflection, it is amazing what appalling ignorance has prevailed concerning the function of the lungs. Every medical textbook describes accurately the immense importance of breathing to the living organism, but nothing further is said as *to the need of assisting the function of the lungs*. There is a deep-rooted delusion that, in providing

lungs, Nature did for the animal economy all that was required in every possible circumstance, and that nothing further is expected from either practitioner or invalid. No better instance of the blind leading the blind and both falling into the ditch, could possibly be given.

The Science of Breathing was rightly characterised in one of the ancient scriptures as the highest of all the sciences. It is not within the province of this volume to discuss the higher aspects of Breathing, which have been sufficiently elucidated in the books of the Ars Vivendi System. What we are at present only concerned with is the *practical bearing of the Science of Breathing upon the treatment and cure of Consumption.*

As soon as Breathing begins to be seriously studied, it dawns upon the mind that not only the sufferer from pronounced Consumption, but the person who may be said merely to be *inclined to be consumptive, or to have a delicate chest*, experiences

considerable difficulty in taking a long and full breath even in the open air. Further, if the breathing power of the person who is in fair general health, be properly tested, good lung capacity will be found to be the exception, not the rule. It is a law of the animal economy that any organ or part that fails to perform the functions it was designed by Nature to carry out, tends gradually through disuse to lose the capacity of performing these functions. Every air-cell, or group of air-cells composing the lungs in the aggregate, that is unable to perform its due and proper function in connection with the inrush of oxygen must, accordingly, deteriorate in power the more its normal activity is interfered with. *Progressive deterioration must continue unless normal activity is more or less speedily resumed.* In plain everyday language, this implies that unless every individual air-cell of the millions that make up the lungs is in good working order from day to-day, the general health will inevitably suffer.

These considerations will make it clear to the reader why *a new type of practitioner is imperatively demanded for the successful carrying on of the Open Air Cure*. There is not a single medical school in the country which includes the teaching of Breathing in the ordinary curriculum. What happened with the Open Air Cure is precisely what could have been predicted from its very inception. The medical men in charge of Sanatoria had never been trained in the science in a systematic manner, and were handicapped from the very start.

What is now necessary is to *formulate the "Open Air" Cure into a system for dealing with Consumption in a really scientific manner*.

This is by no means an easy task. It requires exceptional opportunities for patient and sustained research, as well as actual practical experience, wherewith to test the value of this and that theory or method in actual working order, for a number of years. Enthusiasm is not sufficient to found a science of practical

utility: there must in addition be coolness of judgment as well as unbending resolution.

These conditions and these qualities the author of this volume believes that he possesses. For over twenty years he has studied the problem of Consumption from actual experience of a diverse kind, and has also mastered the various theories that have been put forward from time to time. The only theory of cause and the only practical cure that will prove reliable, are the ones now definitely put forward herein, for they are based upon the mathematical principle of cause and effect, and like all chips from the block of Truth, carry their own irrefutable evidence with them.

The Art of Living

In all ages there has been felt the need by the human mind of a code of rules and exercises, in other words, of a standard of discipline whereby to regulate the individual as an integral whole, as distinguished from

the particular work he has to perform in the community.

It is extremely significant that the very terms "health" and "wholeness" imply the same thing when traced back to their origin. The mind feels instinctively that there must be a canon of discipline, which, if it could be mastered, would be of great service in the development of man as a human being with higher aspirations than the mere animal.

This canon of discipline has been called by a variety of names, from the Platonic Science of Dialectics to the Freemasonry of modern times; and it is based upon the eternal principles which are the same yesterday, to-day, and for ever. While the fundamental principles never vary, and while the remarks of Plato concerning the wholeness of the individual, are as apposite in the twentieth century as in the time of the philosopher himself; still, there are many points in which the modern mind differs in general outlook from the ancient.

Consequently, there is need for the presentment of the grand principle of the ages in a garb suitable to the demands of to-day. This has been done already in The Ars Vivendi System of Health Culture; and therefore it is not necessary for me to go into minute details over questions that are dealt with more fully in the other volumes.

The treatment of Consumption falls naturally into its place as part of the larger science of health sketched in The Ars Vivendi System. It is imperative to make this clear, in order to enable the reader to understand that all the processes and methods now explained, must be carried out *as part of a whole, in particular relation to a particular form of disease known as Tuberculosis or Consumption.*

Without this explanation, it might be argued that such and such a result could be produced equally well in another way, or such and such a method could be varied with advantage.

In the treatment of Consumption, it is

not necessary to introduce the higher ideas of mental development, beyond emphasising the need of strengthening the power of Will, and practising concentration in going through the exercises, etc. Stress must always be laid upon what is essential to the cure, without interfering with individual opinion on questions that do not immediately concern the matter in hand. To deal with Consumption successfully, it is not necessary, or for that matter even desirable, that the practitioner should be acquainted with the advanced ideas. But there is no deviation from the strict rule that the exercises must be carried out in a certain way, and the breathing must be done in the manner prescribed, in order to secure the maximum result in minimum time.

The Vital Scale in Consumption

By reference to Diagram 1, it will be observed that Consumption is placed in Class D. This scale is actually based upon

the scale of Nature herself, and the reader is exhorted to ponder well over it.

The Vital Scale of Consumption, Diagram 3, is also based upon the scale set up by Nature, and it must be thoroughly understood by the reader who wants to solve the problem of the cure of Consumption, either in his own case or in that of others.

There are certain facts which have to be accepted as part of the great scheme of the Universe. One of these facts is the dissolution of the physical body, as the result of the law which decrees that life can be maintained only on certain strict conditions, which have been sufficiently dealt with in the second chapter. Understanding this law, it is easy to predict what is possible, and what is impossible to achieve.

In illustration of my point, let us go back to the candle and the tumbler. By a little careful handling, it is possible to watch the time when the candle goes out. This is the "psychological moment" when it is impossible to revive the flame by raising the tumbler.

DIAGRAM 3

VITAL SCALE OF CONSUMPTION

Border of Consumption

First Stage

Second Stage

Third Stage

Fourth Stage

Impending Death

In Consumption, there is the "psychological moment" when the spark of life can no longer be sustained. It is not so easy to detect this as it is to watch the point of the candle flame. It requires experience and practice, but with time it becomes comparatively easy. *This is the point which naturally determines the problem of the cure of Consumption.*

Glancing at Diagram 3, the tyro can easily judge that the "border of Consumption"—which includes the state in which no lung mischief has been detected by the ordinary means—is the most favourable period of treatment. Next follows the first stage, which, with suitable care, will be cured with comparative ease. Then comes the second stage, which requires more time and perseverance. The dividing line between the second and the third stages renders a cure more difficult, until at length we reach the point where it is not only exceedingly difficult, but practically impossible.

The important point in actual treatment of

Consumption, therefore, is to seize the "psychological moment" which Nature decrees is the barrier between the possible and the impossible.

This moment, alas and alas! has frequently been passed before the victim, and even the doctor, suspected that anything was radically wrong. Of prime importance, therefore, is it to understand the markings of the dial on which is inscribed the "psychological moment."

What the Face tells

In the second chapter, I drew the line of demarcation between a certain kind of learning which is not actually necessary to enable the individual to maintain vigorous health, and *the knowledge which Nature exacts under the direst penalty*. The latter knowledge was shown to be within easy reach of even the humblest intellect.

Even so with the detection of the "psychological moment."

It is easy enough once you master the signs written on the face by the hand of Nature.

The law of structure of living beings ordains that every part of the vital machine is of a piece with the whole. The portion of the human machine that arrests attention first of all is *the face, on which are written not only the character, but the condition or state of health of the organism as a whole.* All we have to do, therefore, in watching for the "psychological moment" in Consumption is to take pains to understand and read *the language of the face.*

Notice first that the face of a person with weak and contracted chest has the same character of narrowness and contraction—on the principle that every part corresponds to the whole. The person with a broad chest possesses in correspondence a broad face.

After familiarising yourself with this simple law, pay a little more attention to the face itself, and you will find a most striking difference in the formation of the nose and the shape of the nostrils. With a narrow chest, the nose will be narrow and thin, and

the nostrils will be pinched, and present a small opening. With the broad chest, the nose will be broad, and the nostrils will give the appearance of width and strength.

This generic rule has no exception, for it is the fundamental law of structure of a living organism. The expert eye can tell from a single glance at the face and nose, whether their possessor will develop Consumption in the ordinary course of his life.

When it is stated that the generic rule of correspondence between nose and chest has no exception, it does not imply that varying conditions will not modify results. The possessor of the Consumption nose and chest will be able to counteract, or to hasten and aggravate the operation of the general law according to his habits of life and his environment. As I am not at present concerned with the Regimen and Hygiene of the Art of Living, I need not enter into those questions. The point I want the reader to understand is that *without the nose and chest of the proper vital capacity, attention to Hygiene and*

Regimen will not be sufficient to combat Consumption in an individual organism.

To put the case as clearly as possible: It is not enough to have air *outside* you for the purposes of life; you must have air *inside* you in *sufficient* quantity.

The regulation of this inside quantity depends upon the formation and condition of Nose, Throat and Chest.

To take a simple illustration. Sit down in a room anywhere you like, provided it has a window which can be opened and shut. If the room is in a large town, it will become stuffy and evil-smelling very quickly if you do not have thorough ventilation. Suppose the room is on the top of a hill, it will take longer to become stuffy if you do not ventilate it properly. But in time it will get as foul-smelling as a room in a town, if you do not attend to the purifying of the air inside. A still better example that will render the point beyond dispute, is that of a ship at sea. It is surrounded outside with per-

fectly pure air, but the air within the cabins may be far from pure unless thorough ventilation is carried out regularly.

The reader will now be able to grasp the immense importance of having pure air *inside* the Consumptive, in addition to surrounding him with pure air outside.

When the importance of this point is grasped, the next step forward *is to assist the sufferer in his efforts to inhale more air.* The problem is the same as that of a window which has become jammed or blocked, and resists your attempt to open it. Your room is becoming more and more foul day after day, for the simple reason that you cannot open the window. You may use all kinds of disinfectants, and may destroy the organisms that begin to congregate in your evil-smelling room—all to no purpose. Nature decrees that fresh air must somehow or other be let into the room, or it will become uninhabitable.

Nose Treatment

Follow the analogy of the window which must be opened to let the fresh air in to purify the room, and you will understand *that in the treatment of Consumption, the first thing to be done is to attend to the nose, in order to clear as soon as possible any obstruction, and enable the fresh air to flow more fully and more easily into the lungs.*

It has been said by a wise man that there is nothing new under the sun. In a general sense that is so, but in some ways there are many things new, at all events to the inquiring and reflective mind. So it is with the nose. I have the right to claim treatment to the nose in connection with Consumption *as an absolutely new discovery*, for the simple reason that in none of the books dealing with breathing in ancient or modern times, have I ever stumbled across the *principle that gives the key to the problem of Consumption.* Several writers on Hygiene in the Nineteenth Century described with accuracy the outward and visible signs of Consumption, and

even went so far as to advocate and practise the open air cure long before the medical profession and the public at large had pricked up their ears in that direction. But no single writer had succeeded in putting his finger on the central point in the treatment of Consumption, and in working at it till a complete system was elaborated, capable of universal use, and of demonstrating, when employed by the right persons, the mighty fact that Consumption can be treated successfully in far less time and with far less trouble than is considered possible by those who do not understand the principle on which it is based.

This discovery was in a sense accidental—if the culmination of a long process of reasoning and determination to solve a great problem, can be said to be accidental. Several years ago I found out that one of my pupils had not been able to breathe through the nose without great effort. The thought struck me that it might be useful to

give special treatment to the nose. This treatment consists of a scientific method of manipulation which is impossible to describe fully on paper, and in which no mechanical or electrical appliance of any kind is permitted.

In the next interview the pupil remarked that the effect of that treatment was remarkable, for the breathing through the nose had been full and easy—a thing that had not happened for many years. This set me thinking, with the result that I tried the same thing on several others with identical results—a *more or less remarkable improvement in the breathing capacity, and consequent improvement in the general health.*

I tested the value of the theory of treatment to the nose in every conceivable way, and in not one single instance was there failure to get beneficial results, which of course varied according to the state of the nostrils, etc. I also watched consumptive persons and others in varying stages of vitality, and incontestably proved that the princi-

ple was founded on the rock, and could not be shaken by any amount of doubt or incredulity. It is a Law of Nature which, once understood, can no more be denied than the fact that two and two make four.

The treatment herein advocated is diametrically opposed to the ordinary methods of electric cauterising, nasal douches, medicated inhalation, or mechanical appliances. It can only be done satisfactorily by a highly trained operator, who must be fairly high up in the vital scale, if not actually in Class A in Diagram 1, certainly not lower than Class B. A weakly operator would exhaust himself and do very little good, if not actual harm to the patient. The original idea of the term "health" is wholeness and strength, and the original idea of healing is to impart wholeness and strength. Just as a pauper cannot give alms, so an organism below par cannot impart strength. This has always been the weak point in the practice of medicine, which instead of being confined to the proper type of practitioner, strong in

mind and body—the true priest or expounder of the mysteries of Nature—has fallen very largely into wrong hands.

This will form a cardinal point in the scheme for State Sanatoria worked out in the last chapter of this volume.

Throat Treatment and Exercises

Of equal importance with the nose—for the mucous membrane and nervous mechanism of the two work closely together—is proper treatment to the throat in every case of Consumption.

The throat can be strengthened to resist colds and sudden changes of temperature, even in cases that have been delicate for years, by skilled manipulation and exercises without any recourse to medicine or operations, which, so far from curing in the way Nature requires, often produce irremediable consequences. Right use of the voice in speaking and in singing is a most valuable aid to the recovery of health. *But the caution must be insisted upon—not to strain the throat*

at all. Strain of any kind is bad for the living machine, for it lowers vitality and wears out the tissues. In the section dealing with the athlete, this will be more fully explained.

Chest Exercises

The same principle of gentle manipulation, accompanied by suitable exercises, applies to the treatment of the chest in Consumption. As a rule, *the chest becomes a rigid iron case, which suppresses lung action and aggravates the mischief of lung inactivity that has already commenced.* Hence suitable measures must be adopted to render the framework more supple, in order to allow for the greater expansion of the lungs consequent upon the larger volume of air admitted by nose and throat.

It must be distinctly laid down as an axiom that violent exercise or manipulation is not permissible in the treatment of Consumption in any of its stages. This applies particularly to the practice of breathing,

which must be done gently, easily, and fully, without perceptible effort. *That is the reason why treatment to nose and throat must accompany breathing exercises.* If the patient has to overcome more than ordinary resistance in inhalation and exhalation, the good he receives is all but neutralised by the larger expenditure of force entailed in carrying on the operation of breathing. This is where the science of breathing and the skill of the practitioner are shown.

Why Athletes Develop Consumption

It has been a strong point—an extremely strong point—in the theory of Bacteriology that there must be a bacillus at work in Consumption, because it happens frequently that strong men and athletes contract Consumption. I have often heard the statement made that So-and-So was in perfect health till the bacillus got hold of him, and made a complete wreck of him in a few months. Such a fine strong man, with such muscles, etc. ! I admit that on the surface,

the argument in such a case appears strongly in favour of the bacillus; but a little learning is truly a dangerous thing if it blinds the mind to the real cause. Certainly it has been dangerous in the case of the bacteriologists, who have jumped to conclusions which Nature never sanctioned nor even tolerated.

To fully understand why athletes have frequently died of Consumption, we have to go back to the principles of life worked out in the second chapter. There it was shown that in the living organism, "metabolism," or chemical action, is constantly going on under the direct influence of oxygenation of the tissues caused by the tidal flow of air in the lungs. There is never-ending "building up" and "pulling down," the worn-out or effete matter being taken away through the assigned channels, the chief being the furnace of the lungs.

What does the athlete do? He produces an enormous and violent chemical action in his organism, far more than is demanded by Nature for her own purposes—

well being of the whole ;—and in the general and comprehensive language of the engineer, he subjects the machine to an abnormal strain. Every person who is in charge of a machine will tell you that machinery will not stand excessive strain, without wearing out more quickly than if it were running at ordinary pressure and speed. In fact, every machine has a point of resistance beyond which it is not safe to drive it.

Applying the same considerations—and nobody in his senses can raise the objection that they are inapplicable to the living machine—to the case of the strong man and the athlete, we find precisely identical results. The greater and more violent the strain the athlete undergoes, the more certain is he to incur the inevitable consequence of prematurely wearing out after the fashion of the non-living machine.

Particularly is this the case with those whose nasal formation and chest capacity are not in Class A, Diagram 1. I remember seeing in a magazine an article on Athletes,

the portraits of the most famous being given. One face particularly struck me. I knew for certain that he must have died of Consumption, unless he had been as great a genius in evading the penalty exacted by Nature as he had been in winning cups and medals. I read on, and found that he had died exactly in the way he was bound to die.

There were other faces in the article where the symptoms were not so pronounced as in this one.

The reason why athletes develop Consumption is, in reality, very simple—though learned compilers of medical text books may not quite like to throw overboard the bacillus—the strain of the organism upsets the equilibrium of metabolism, resulting in preponderance of “pulling down,” or destructive chemical action. This is counteracted to a very large extent by first-rate lung power, and good formation and condition of nose and throat, enabling a large supply of oxygen to be taken in. If, as is generally the case, the

athlete has not a first-rate chest and nose, he is bound to pay the forfeit.

Exercise and work are very different things, when understood. Exercise should be relaxation and *recuperation of energy* by the cell-units of the body; work is the *expenditure of energy*. Expenditure means spending or using up anything, whether money, nerve force, or muscular power. Once you use it up, it is gone; and you must borrow or produce more if you want to keep up the proper balance. Due expenditure is part and parcel of life; undue expenditure, whether the result of ignorance or external compulsion, interferes seriously with the scheme of Nature. It matters not to what undue expenditure is owing—excess in honest work caused by the daily struggle for existence, excess in physical exercises prompted by desire to excel and break the record, excess of any kind, in short—the laws of Nature affecting the living machine cannot be transgressed with impunity.

Summary

It will assist the reader's mind if the main principles of the Real Cure of Consumption are summarised.

- (1) Knowledge of the cause of disease is half its cure. This applies particularly to Consumption, which is caused solely and entirely by want of sufficient oxygen in a particular organism.
- (2) Bacteriology has admitted that in practical treatment of Consumption, the most feasible method to adopt is the principle of fresh air. This is the leading idea of the Open Air Cure.
- (3) The Open Air Cure as carried on at Sanatoria in recent years, has not fulfilled the expectations that were formed at its inception. Hence there has been a decided tendency to try various sera to deal more effectually with Consumption.

- (4) Consumption being the result of a cause, inadequate supply of oxygen, it follows naturally that nothing but compliance with the law of supply can possibly arrest the disease.
- (5) *The Open Air Cure demanded a new type of practitioner well versed in the Science of Breathing, and skilled in certain processes which are designed to assist the Consumptive in his efforts to get more air into the starved lungs.*
- (6) These processes concern mainly Nose, Throat, and Chest, the organs engaged in respiration.
- (7) By understanding the vital scale in Consumption, it is easy to determine whether a cure is possible in a particular case, or whether amelioration only, and to a more or less limited extent, can be hoped for.
- (8) The reason why athletes frequently develop Consumption, is that the excessive strain undergone for a number of years has severely taxed

the organism as a whole, resulting in premature break-down and decay of organic force. This happens invariably if the formation of nose and chest is not superlatively good.

- (9) When only a limited supply of oxygen is possible as in nasal congestion, the lungs are not able to burn up the *debris* caused by the excessive wear and tear of severe organic strain. By acting directly upon the nose, improvement in the breathing capacity invariably takes place. When accompanied by systematic treatment to the chest and the throat, the improvement is much more marked.
- (10) It is not enough to put the Consumptive in the open air. *He must be assisted to breathe, for he is not able to take into his lungs a sufficient quantity of oxygen to control the disintegrating process going on within.*

- (11) Complete understanding of the laws of vitality renders resort to sera or drugs in Consumption absolutely unnecessary and even ridiculous.
- (12) Cause and effect are intimately linked together in Consumption. Want of oxygen is the cause, and supply of oxygen is the cure.

CHAPTER IV

ATTEMPTS AT REFORM

The theory of the true origin, and the scientific treatment of Consumption presented in Chapters II and III was put to the test in so many ways in my own circle of students and pupils, and verified to such an extent that no doubt could reasonably be entertained as to its practical value in dealing with the problem of tuberculosis.

Case after case demonstrated the efficacy of systematic treatment to nose, throat, and chest, as explained in the previous chapter. The results were so striking as to justify an active propaganda with the object of introducing the principle as widely as possible to the notice of the medical profession and the public at large, by means of lectures and letters to the Press.

At length it was decided that the time had come for a definite offer to select six

ordinary cases in the first stage of Consumption for treatment on this system, and *compare the results with those obtained by the ordinary Sanatorium methods*, — whether tuberculin or any sera or drugs were employed in conjunction with the Open Air Cure, or not.

The Honorary Secretary of the Order of Ars Vivendi wrote to several gentlemen of prominence, with the object of forming an independent committee to watch results and draw up an impartial report. Care was taken to explain that the methods proposed to be adopted did not constitute a secret remedy such as a drug or serum, but that it formed part of a definite system for *quickenning the Open Air Cure, by improving the breathing capacity of the consumptive without entailing the slightest strain upon the organism.*

To the suggestion that an independent committee be formed to chronicle results in the treatment of six cases selected by the committee, several replies, satisfactory and otherwise, were obtained. Among others,

the Editor of the *Lancet*, the leading medical paper, wrote, date July 2nd, 1908 :—

DEAR SIR,—We do not join such committees, as it is our duty to remain unprejudiced so as to be able to discuss their reports. I note the claim that knowledge is now possessed “which will completely revolutionize the present methods of treatment,” so that it is inevitable that the work will come before us in the ordinary course of affairs, if the claim is at all substantiated.

Yours faithfully,

THE EDITOR.

Professor Sims Woodhead, a member of the Tuberculosis Commission, had been approached on the matter by Mr. J. W. Williams (another member of the Order of *Ars Vivendi*, and chief lecturer of the system), and invited to co-operate in the matter of selection of six cases for treatment under the supervision of a committee. He wrote to the Honorary Secretary as follows :—

Pathological Laboratory,
New Medical School, Cambridge,
July 1st, 1908.

DEAR SIR,—I thank you for your letter of June 29th. The fact of the matter is, I was so busy with the end of term here, and now with getting ready for the long vacation course that I have been unable to make the arrangements which I wish to make for Mr. Williams. I am, however, going up to town in the course of this week, and I hope to see the Secretary who spoke to me some time ago about putting some cases at Mr. Williams' disposal. Anything that I can do to help in this cause, I am very willing to do.

I am, yours faithfully,

G. SIMS WOODHEAD.

E. W. Keen, Esq.

The importance of the cause demanded that there should be no hole-and-corner Committee, but a thorough investigation, carried out in an impartial spirit, of a new principle put forward in a scientific

manner. It was therefore felt that the Sanatorium where the test should take place should be above reproach in every sense, both as regarded fairness to the treatment proposed on the one side, and the certainty of an impartial verdict under suitable conditions on the other side.

After due consideration, it was decided to lay the proposal before the King Edward VII Sanatorium at Midhurst, which had been opened recently. Mr. J. W. Williams called upon the resident physician in charge at the Sanatorium, explaining the nature of the proposal which was made solely in the interests of humanity. The reply was that before anything could be done, it was necessary to get the King's permission. Upon this information, I wrote to His Majesty a full account of the proposal to form a Committee to watch results of treatment of six selected cases on the principles described in Chapters II and III, and requesting His gracious permission to select those cases

from his own sanatorium. The reply was in the affirmative :—

Buckingham Palace,

July 3rd, 1908.

SIR,—In reply to your letter, which I have had the honour of submitting to the King, I am directed to inform you that you had better put yourself into communication with Dr. N. D. Bardswell, King Edward VII's Sanatorium, Midhurst, Sussex, in the matter to which you refer.

I am, Sir,

Your obedient Servant,

Arthur Lovell, Esq.

KNOLLYS.

On receipt of His Majesty's letter, I directed the Hon. Secretary to communicate with Dr. Bardswell, making a formal proposal to take six cases from the King Edward VII Sanatorium. The following reply was received :—

King Edward VII Sanatorium,
Midhurst,

July 10th, 1908.

DEAR SIR,—I beg to acknowledge your letter of July 9th; I am forwarding the same to His Majesty's Executive Committee for the Sanatorium.

Yours faithfully,

NOEL BARDSWELL,
Medical Superintendent.

E. W. Keen, Esq.

After about a fortnight, another letter was received to the effect that the offer was declined on the advice of the Medical Staff of the Sanatorium!

I ask the reader to judge why my proposal was declined. Let us suppose it was from fear of exposing the patients to danger, or some other equally laudable motive. Or let us suppose that the Open Air Cure was then in such a perfect condition that no innovation of any kind was called for or could even be tolerated. Can these contingencies

reasonably be claimed to hold in the case of the King Edward VII Sanatorium? It was expressly understood that no drugs of any kind whatever were employed in the test proposed—all that was asked being facilities for manipulating and exercising nose, throat and chest in a certain manner for the purpose of allowing more free ingress of air into the lungs of the consumptive. *The medical staff could have imposed any conditions they liked, short of actually interfering with the essential principles of the treatment.* Could anyone in his senses conceive of danger under these conditions, and will anyone who knows anything about the subject of Sanatorium treatment declare that what I proposed had been tried before without success? Suppose, again, it is argued that the medical man must not try anything new in the way of treatment. Such a contention is supremely silly, for *medicine is constantly experimenting, even at the expense of enormous suffering to dumb animals and even human beings.* The tragedy of Koch's Tuberculin

involved untold suffering and loss of life, and medical men throughout the world gave it a trial without knowing anything whatever about it. Medicine, in short, is one huge mass of innovation and experiment—generally with the wrong end of the stick, hardly ever with the right.

The medical staff of the King Edward VII Sanatorium would, of course, give me credit for everything but the one thing I had in view—*desire to prove the possibility of doing more for the treatment of Consumption than anything that had been attempted yet in the history of the disease.* I knew what *had been done*, and I knew what *could be done* to quicken results. I had the courage of my convictions, and took the straight course to prove it in what appeared to me the right way. This experience showed the futility of making any further attempts in this direction, for I have little spare time and do not intend to waste it.

Another incident that proves the impossibility of the attitude taken up by a

certain section of the "powers that be" in medicine, is the following. I emphasize a "certain section," because the main body of the profession is desirous of improving the great science and art of healing disease, by adopting new ideas and methods that prove of service in the alleviation of human suffering.

My attention was directed to a cutting from the *British Medical Journal*, in which the Editor wrote: "We do not know how far these various representatives of spiritual healing agree with each other. If all or any of them can show that they have discovered a new force, or a new method of applying one already known to the cure of disease, rational medicine will welcome a new weapon. By all means let us know the full power of the spirit over the body. Only let us have facts which can be fairly and fully tested. A scientifically-trained doctor takes nothing on trust, and there can be no useful co-operation between medicine and spiritual healing unless the facts of each case are

fully disclosed. That is the point where science and faith part company."

That article appeared to me to be written in a perfectly fair spirit. There seemed to be a genuine desire to learn something new on the part of the Editor of the *British Medical Journal*. It was not the usual rabid rhodomontade against the curtailment of the rights and privileges of the medical man by the growth of advanced ideas, etc. I am not in any sense a "spiritual healer" or "faith curer," but I know well the action of the force that brings about extraordinary results, and I have reduced this action to a definite system which precisely corresponds with the demand of the *British Medical Journal*—"By all means let us know the full power of the spirit over the body. Only let us have facts that can be fairly and fully tested."

The real secret of "spiritual healing" is vitality or nerve force acted upon by mind. The reader will remember that in Chapter II I stated that the force produced by a

living machine can be measured with accuracy both as to quantity and quality. This is to be taken in a literal, not a metaphorical sense. Vital force is a form of energy with laws peculiar to itself which differentiate it from any other form of energy. Upon the knowledge of this force depends the real science of the cure of disease ; and the trained practitioner of the future will regard the present crude medical ideas with as much contempt as the medical man of to-day looks upon the crude ideas of the leech of the Middle Ages, such as bleeding, black-pills, and dread of fresh air in Consumption, etc. The governing power of the living organism is "vital force" or nerve-energy, which is not a hypothetical, mysterious something which nobody can understand ; but an actual palpable force which can be controlled, and regulated in a precise and scientific manner, without suggestion or mental influence of any kind whatsoever being exerted on the patient. *In cases of nervous affections, insomnia, mental*

derangement, etc., *this force clings to and envelops the organism in whole or in part, like a fog which hangs as a pall and cannot be driven away.* The patient may try this and that remedy without avail. Sometimes the fog may be lifted by change of air and surroundings; but to the practitioner unacquainted with the action of this living force, the fog becomes difficult and generally impossible to lift. Hence the futile attempts on the part of the ordinary medical man to deal with "nerves," which are declared incurable. To the practitioner who understands the mode of action of this force, nervous affections become problems of easy solution.

Having perused the paragraphs of *The British Medical Journal*, and having performed original experiments on nerve force which provided the solution to the questions put, I called upon the Editor in person, and volunteered to lay before him and his readers certain facts and experiments which incontestably demonstrated the action of

the living vital force apart from mental suggestion. The Editor was sufficiently impressed with what I told him to consent to accept about half-a-dozen articles on the subject for insertion in *The British Medical Journal*. So far, so good. But in a few days I had a letter from the Editor to this effect :—

“The British Medical Journal,”

January 20th, 1909.

The Editor presents his compliments to Mr. Arthur Lovell and begs leave to state that, having given careful thought to the whole matter, he regrets that he cannot see his way to insert the articles offered by Mr. Lovell in *The British Medical Journal*. If Mr. Lovell could condense what he considers to be the essence of his teaching into one article, say of one thousand to fifteen hundred words, the Editor would be pleased to consider the question of publication.

This was a very difficult feat to accomplish, especially in view of the original demand on the part of the Editor: "By all means let us know the full power of the spirit over the body. Only let us have facts that can be fairly and fully tested."

It was my intention to give the theory first of all, and follow it by certain original experiments, with full explanation of the conditions under which any medical man who cared to investigate, could perform them himself. However, I did my best to condense the substance of the theory within the compass of a small article, and gave six cases, with the names and addresses, in confidence to the Editor. If this article, short as it was, had been inserted, it would have opened up an entirely new field to the medical man, for it would have shown him *a new way of dealing with nervous affections, and actually of regulating the circulation of the blood in inflammatory and congested states.* Supposing I was putting forward what was demonstrately untrue, I could easily be

brought to book by such stalwart opponents as the Editor and readers of *The British Medical Journal*.

This was the result:—

“The British Medical Journal,”

February 5th, 1909.

The Editor presents his compliments to Mr. Arthur Lovell and, while thanking him for the offer of his paper on “Spiritual Healing,” regrets that he does not see his way to publish it in *The British Medical Journal*. It is, therefore, returned herewith, in accordance with Mr. Lovell’s request.

The columns of *The British Medical Journal* are frequently the receptacle of letters and articles on “spiritual healing.” But these are of such a puerile character, and so obviously written by men who know nothing of the subject beyond a few stock phrases for and against, that the Editor can go on for ever issuing pious wishes to get hold

of facts which can be investigated by himself and his sub-editors. "Spiritual healing" is such a delightfully vague term that it may mean everything and nothing. *What the world of to-day wants to know, is whether the misery of human pain and disease can be alleviated in a more thorough fashion than has been done up till now.* Just imagine what the state of knowledge would be, if every department of scientific research were to refuse to acknowledge any new discovery or invention, however advantageous to the human race, unless it came from within its own privileged ranks. Such an idea is preposterous—so much so that an engineer or astronomer would laugh at it. The only question in science and scientific investigation is—*whether a new fact or law has been found.* What matters it whether So-and-So has been believed since man's appearance upon this planet? The point is whether it is true. If it is not true, throw away the belief immediately, and accept the fact which Nature provides.

The health of the human race, individually and collectively, is of such immense importance that it is nothing less than "infamous conduct"—to use a phrase that savours somewhat of professional etiquette—to bar the progress of ideas that will throw new light on human disease. I repeat again that I am not making an attack upon individuals as such, but upon the system which makes such resistance possible.

A practical scheme adequate to cope with this intolerable evil, will be sketched in the next chapter.

CHAPTER V

STATE SANATORIA

A Practical National Scheme

The problem of Consumption has assumed such a serious aspect in modern civilization, that many Governments have taken the matter in hand with a view to mitigating the evil as far as possible. In view of the enormous loss caused by the decline of the vigour of the individual citizen, at an age when he or she should be capable of doing good work for years to come, it is just and right that the State should take an active part in staying the ravages of the White Plague. In this case, health is the first wealth: for the national assets are considerably lessened by failure of production on the part of the masses. Statistics show the tremendous loss from year to year caused by the prevalence of Consumption among the working men and women of the various

countries—a loss that, added up, would total several millions of pounds sterling per annum. This does not fully represent the evil of Consumption. Human life cannot and must not be weighed in the balance against gold. The monetary loss is nothing compared with the anguish and misery of those who watch, month by month, the insidious decline of the strength of those near and dear to them, and try in vain to bring bloom to the sunken cheek, never abandoning hope until the last breath is drawn, and the silver cord is loosed.

The question of Consumption, then, is far too great to be treated as a private, or as a purely medical question. *It demands absolute freedom of thought, and calls for the very highest type of mind to grapple successfully with its solution. It is in this spirit that the practical national scheme now sketched is put forward, and it is in this spirit that it must be criticised.* There is no use mincing matters. Either what I say is true or it is not true ; either what I propose is practic-

able or it is not practicable ; either what I say is good for the community or it is not good.

The State having already made a beginning in the direction of tackling the problem of Consumption, it does not require much acumen to perceive that the time is not far off, when Sanatoria for Consumption will be owned and carried on by the State not for gain, but for the benefit of the community. To put it at the very lowest estimate, it would pay the State handsomely if it could discover a practical method of dealing satisfactorily with Consumption. This is a point on which extreme Socialists and extreme Individualists would be found in perfect unison.

Practical Politics

When it comes to practice, however, considerable difficulties present themselves. *First and foremost is the chaotic state of opinion upon the treatment of Consumption.* In some quarters, Tuberculin is again revived ; in

others it is regarded not only as useless, but as highly dangerous. It is not necessary for me now to deal with Tuberculin, beyond referring to the variety of opinions expressed by the medical profession, and showing that there is no unanimity in its favour.

The only thing upon which there is a consensus of opinion, is the value of fresh air in the treatment and cure of Consumption.

Chapters II and III have shown not only the imperative need of sufficient oxygen for the purposes of life, but the equally imperative need of assisting the Consumptive to take in an adequate supply of oxygen, by adopting certain measures to nose, throat, and chest.

There is no disguising the fact that this implies a *revolution in the present methods of treatment of Consumption*. The present orthodox system is based upon a false idea—that Consumption is a purely infectious disease caused by the invasion of the tubercle bacillus.

I am well aware of the indignation that

statement may rouse in certain quarters, and I am ready to meet it with equanimity.

There is a very homely adage to the effect that the proof of the pudding is in the eating.

The only practical way of proving or disproving a theory, is *to put it to the test on a sufficiently large scale to leave no room for doubt.*

I maintain that Consumption is primarily caused by want of sufficient oxygen, and can be cured only by supplying oxygen in larger quantities. The followers of Koch put Consumption down to the bacillus as the sole cause. Upon this theory they raise a superstructure of tuberculins, vaccines, and sera as means of doing something wonderful to the bacillus. I regard this theory as not only preposterous, but too childish to be seriously discussed by anyone who knows anything of the laws governing vigorous health.

However, this is not the point just now. In view of the immense importance of the solution of the problem of Consumption

to the individual and to the community, *there should be a National Test carried out under the auspices of the Government, with a view to deciding the best course to adopt with regard to the problem.*

This could be arranged as follows :

The State should take over a large sanatorium for the purpose of experimenting with proposed remedies for Consumption. For various reasons, the most suitable would be the King Edward VII Sanatorium at Midhurst. As a memorial to His late Majesty, nothing more suitable could be proposed than to associate his name, in perpetuity, with the final solution of one of the greatest problems the human mind is called upon to undertake.

Assuming, for the sake of argument, that this initial step was taken, the rest would be comparatively easy.

The Sanatorium would constitute the national headquarters for the study of Consumption, and act as a training centre for heads of other State Sanatoria, travelling

lecturers, teachers, and nurses—in addition to collecting, co-ordinating, and distributing information on the subject that would serve for the guidance of the nation at large. In a few years, the problem of Consumption would be solved for ever in the history of civilisation; and it would be impossible for anyone but an ignoramus to propose fantastic and ridiculous “*cures*” *which have never been and never will be sanctioned by Nature.*

To bring about this grand consummation, which all will agree is devoutly to be wished for—though it may appear far-fetched and visionary to the stolid Scribe and Pharisee of to-day—it is only necessary to do a little thinking of a mild and simple kind.

What is worth doing at all is worth doing well. Why tinker at reform when it is equally easy, more advantageous, and absolutely necessary to go to the root of the matter? Further, this is a reform which no one would dare to oppose, once

it was understood. Ignorance is the great enemy. Then why should it not be done?

The first step forward is to test thoroughly the system of treatment advocated in this volume, and compare results side by side with any other method proposed for Consumption. This could easily be done by taking six cases at the Central Sanatorium for treatment by this system; six cases by the present Open Air Cure; six cases by the tuberculin treatment or any serum that may crop up later.

When a certain period of probation—say six months—had elapsed, the results could be tabulated for general use. Then would commence the active working order of the Headquarters for Consumption. The first thing to be done, would be to train the selected candidates for the post of Medical Officers of the various State Sanatoria throughout the country. These candidates would be drawn from medical men, who would pass two examinations:—

(a) Physical Fitness.

This is imperative, for the head of a Sanatorium must belong to Class A in Diagram 1.

(b) Breathing and General Exercises suitable for the Consumptive.

After passing successfully these two examinations, the candidate for the post of Head of a Sanatorium should be given a three months' training in the Nose, Throat, and Chest movements referred to in the previous chapters, as well as in the principles of Hygiene, Concentration, and Development of Will-power, all of which are essential elements in the making of a successful director of a Sanatorium.

Nurses for Consumptive cases would undergo a shorter course of training, based upon precisely the same principles and subserving the same ends.

A very important part of the national scheme for dealing with Consumption is the treatment of consumptive children. While inculcation of the general laws of Health will occupy an essential portion of the curriculum of all schools public and

private, in the near future, it is impossible for the ordinary teacher to deal with cases that require individual treatment. This must fall within the sphere of action of the nurse or the medical man who had undergone previous training, and who would be able to detect at a glance suspicious cases of nasal congestion and chest weakness, long before the untrained eye could see anything amiss.

An important feature of the national scheme for the solution of the problem of Consumption, will be the education of mothers of families in the principle of detecting and dealing with nasal congestion, which is extremely prevalent in babies and young children, accounting for various forms of infantile diseases.

There would thus be formed a chain of union linking the active treatment carried on at the Sanatoria, with the preventive educational training and treatment given to children at school, as well as at home.

The chain would be *firmly riveted to the*

true principle of the cure of Consumption—assisting the organism to procure a larger supply of oxygen, the deprivation of which is the direct cause of the ravages of the disease.

Conclusion

The underlying principle of the proposed national scheme is unassailable in theory, as well as feasible in practice. If carried out, it would do more for Consumption than anything yet attempted, for it would introduce a new principle of treatment which would weld the Open Air Cure into a consistent scientific whole, and give another direction to experimental research.

The objection that it would be difficult, if not impossible, to get the right type of practitioner that is imperatively demanded does not hold, for candidates for the Army and Navy Medical Service have to pass an examination for physical fitness. Besides, if a thing has to be done in a certain manner to produce certain desired results—and

Consumption can never be dealt with satisfactorily in any other way than the one ordained by Nature—*it must be done*.

Human life is incessantly changing in its struggle onwards towards the ideal. At the present time, the social fabric, as a whole, is in the melting-pot, while the old-fashioned ideas of orthodox medicine have to give way, however reluctantly, to a higher conception of health which embraces the mental as well as the physical. This new wine cannot be put into the old bottles. To meet the requirements of to-day, therefore, a new type of practitioner must be created who studies the science of vitality in all its aspects, and treats the invalid as an integral whole.

The science of Breathing includes the question of diet. The terrible mistake committed in several Sanatoria, at the start of the Open Air Cure, of forcing the unfortunate Consumptive to swallow a quantity of food which he could not possibly digest, and which the stomach of the strongest labourer

could not stand with impunity, was due to total ignorance of the relation between digestion and breathing. Many were sent to a premature grave through this fatal mistake. If the stomach is overloaded habitually it is impossible to breathe freely. The Consumptive's diet must be neither too much nor too little; and it must be easily digested, or the vital force is severely taxed.

Another important factor in the treatment of Consumption that must be thoroughly understood, is the action of mental emotion upon the organism. The practice of frequently taking temperatures, etc., worries and frightens the patient to such an extent that his nerve force is in a constant state of agitation, rendering breathing more difficult and spasmodic, and depressing the whole system.

In brief, there must be a complete revolution in the methods of conducting Sanatoria—public and private—otherwise time and money, to say nothing of the lives of the victims, will be sacrificed on the altar of

ignorance, prejudice, and stupidity. Tuberculin and sera are attempts—futile as well as childish—to cheat Nature. Be not deceived, Nature cannot be cheated.

The Science of Vitality is in its infancy, as the Science of Electricity was in its infancy half a century ago. There is a principle which modern research tends, more and more, to establish as a truth of the first importance—that behind all phenomena is one Force manifesting itself in various modes of activity. In the human organism, this One Force works under definite laws which differentiate its action from other modes, and which, when understood, will produce a higher and more noble type of womanly beauty and of manly vigour, as easily and naturally as, when disregarded, the premature decay of Consumption.

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